

REMARKS

These remarks are in response to the Office Action mailed December 31, 2008. Claims 1, 30, 32 and 33 have been amended. Support for the amendments can be found, for example, at paragraph [00069] as-filed. Claims 32 and 33 have been amended to clarify the claimed invention. No new matter is believed to have been introduced.

I. REJECTION UNDER 35 U.S.C. §112, SECOND PARAGRAPH

Claims 1, 5, 8, 10, 13, 16, 17, 19, 21, 31 and 32 stand rejected under 35 U.S.C. §112, second paragraph as allegedly being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards and the invention. In particular, the Examiner indicates that the term “Rad51 associated activity” is not clear. Applicants respectfully traverse this rejection with respect to the amended claims.

Claim 1, upon which the other claims depend, has been amended to remove “associated”. Applicants submit that Rad51 activity is known in the art. Accordingly, Applicants respectfully request withdrawal of the rejection.

Claims 30 and 33 stand rejected as allegedly indefinite for recitation of “Rad51 associated activity” in claim 30. Applicants respectfully submit that claim 30 does not recite the phrase. Accordingly, Applicants respectfully request withdrawal of the rejection.

Claims 32 and 33 stand rejected as allegedly indefinite for recitation of “proteins that promote chromatin formation are selected from the group consisting of ACF, NAP1, topoisomerase I, histone and any combination thereof.” The Examiner indicates that it is unclear why histones are recited in the dependent claims.

Applicants submit that proteins in addition to histones are useful in the formation of chromatin. Such proteins include, for example, ACF, NAP1, topoisomerases and the like. Applicants have amended claim 1 and 30 (upon which claims 32 and 33 depend) and claims 32 and 33 to further set forth this concept. Applicants believe that the amendments and remarks above overcome the rejection.

For, at least, the foregoing reasons Applicants believe that this rejections may be properly withdrawn.

II. REJECTION UNDER 35 U.S.C. §102

Claims 1, 5, 8, 10, 13, 16, 17, 19, 21 and 30-33 stand rejected under 35 U.S.C. §102(b) as allegedly anticipated by Datta *et al.* as evidenced by Polisky *et al.* Applicants respectfully traverse this rejection.

Datta *et al.* teach that histone association with SV40. Furthermore, Datta *et al.* teach that triplex formation promotes recombination in cell free extracts (see, e.g., the title; Abstract; Figure 1, last paragraph of page 18023). In other words, the authors find that the formation of triplex DNA (by the addition of a triple helix-forming oligonucleotide; termed TFO) can promote homologous recombination in vitro. Simply stated, Datta *et al.* find that the addition of single-stranded DNA to double-stranded DNA (SV40 vector) enhances recombination in vitro.

In contrast, Applicants invention provides and demonstrated that packaging of double-stranded DNA into chromatin enhances homologous recombination in vitro. To package the double-stranded DNA into chromatin, histone proteins are added to double-stranded DNA along with chromatin forming proteins. Simply put the present invention is addition of proteins to DNA vs. DNA to DNA as described by Datta *et al.*

The results of Datta *et al.* with triplex DNA do not suggest that chromatin would enhance homologous recombination. There is no relation between the single-stranded DNA (TFO) used by Datta *et al.* and histone proteins. Furthermore, a word search of the references does not identify a single reference to either 'histone' or 'chromatin' in Datta *et al.*

Therefore, the results of Datta *et al.* are not related to those described in the present application. The addition of single-stranded DNA (TFO) to DNA is not the same as the addition of histone proteins to DNA. Triplex DNA is completely unrelated to chromatin. Chromatin, not triplex DNA, is the natural form of DNA in eukaryotic cells.

Thus, Datta *et al.* do not teach or suggest each and every element of Applicants' claimed invention. Accordingly, for at least these reasons Applicants submit that Datta *et al.* and evidenced by Polisky *et al.* fail to set for a proper grounds for rejection under §102. Applicants respectfully request withdrawal of the rejection.

For at least the foregoing, the Applicant submits that the claimed invention is patentable and request reconsideration and notice of such allowable subject matter.

The Director is authorized to charge any required fee or credit any overpayment to Deposit Account Number 50-4586, please reference the attorney docket number above.

The Examiner is invited to contact the undersigned at the below-listed telephone number, if it is believed that prosecution of this application may be assisted thereby.

Respectfully submitted,

GAVRILOVICH, DODD & LINDSEY LLP

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By: /Joseph R. Baker, Jr./
Joseph R. Baker, Jr.
Registration No. 40,900

4660 La Jolla Village Drive, Suite 750
San Diego, California 92122
(858) 458-3607 (Main)
(858) 458-9986 (Fax)